
DURRA PANEL®

Sustainable, Durable & Affordable

A versatile sustainable building material that is made entirely from straw.

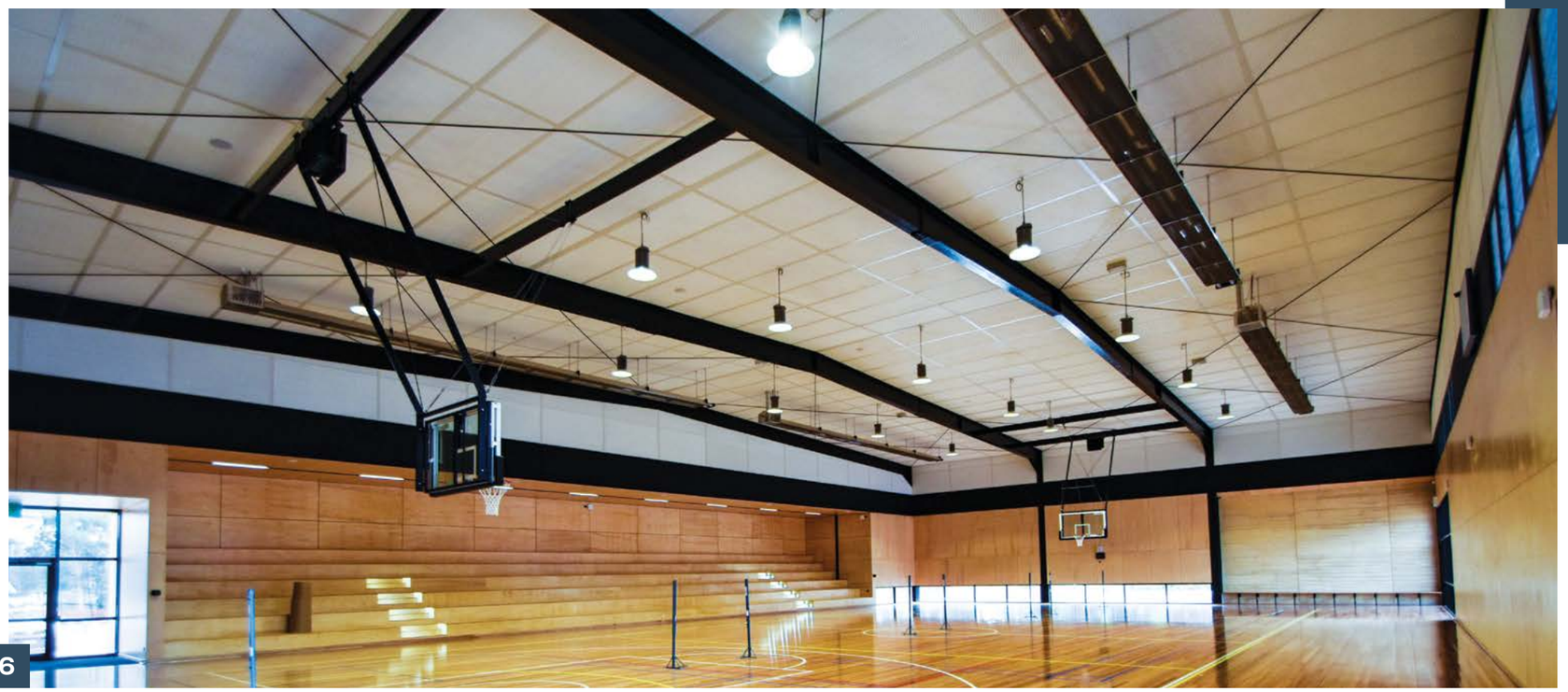
CONTENTS:

About Durra Panel

Durra Panel® is the fully certified wall and ceiling board that insulates against sound and heat, while being stronger, safer and cheaper than an internal plasterboard wall. In addition, because it's made entirely out of straw sourced from local Australian farmers, it's extremely environmentally friendly.

Durra Panel® boasts the desired properties of acoustic and thermal insulation, low embodied energy and durability along with a high degree of impact resistance. The panel can achieve a one-hour fire rating, making it suitable for use in a range of commercial, industrial and residential applications. Durra Panel can be used to create simple and safe ceiling and wall systems along with non-load bearing partition walls. Importantly, Durra Building Systems provides cost effective savings on site, greatly reducing labour and build times.

Manufactured in Ortech Industries' Bendigo factory located in Victoria, using a process developed in conjunction with the CSIRO, Durra Panel® is used in airports, convention centres, sports stadiums and landmark projects around the globe. It is also an ideal material for residential construction, being made from non-toxic organic material that is not only easy to work with but also simple to dispose of, with offcuts able to be composted and used as a soil conditioner.



Why use Durra Panel

The environmental impact of energy production is intensifying, and the supply of natural resources such as timber, sand and fossil fuels is under pressure to satisfy a worldwide demand. Because of this, the need for sustainable materials in building construction has become a modern-day necessity to ensure the global demand for natural resources can be sustained. Using sustainable materials is one way that we can collectively seek to minimise the effects of climate change where possible.

Ortech Industries takes on this responsibility with its conversion of a wasted agricultural by-product into a strong and durable construction material, Durra Panel®. The unique panel core extrusion process requires no water, gas, additives, glues or chemical binders and produces zero toxic waste. With outstanding thermal and acoustic insulation properties that embody CO2 rather than emit it, Durra Panel® offers superior environmental performance compared to other rigid board construction products.

Each phase of the panel's life cycle provides an environmentally preferable outcome, reducing the impact of built environments with a material that has an exceptionally low embodied energy and is 100% recyclable and biodegradable at the end of its natural life.

Acoustics

Durra Panel® is an extremely effective barrier to sound, with a proven track record for low frequency noise control. Specifically, it reduces noise associated with aircraft, heavy industry and in performance spaces such as concert halls and arenas. Durra Panel® can be finished in a variety of ways to suit specific project needs such as noise reduction or internal reverberation control, with both sound absorption and sound transmission loss being able to be provided. Designed across commercial, industrial and residential applications, Durra Panel® is the labour-saving alternative to expensive multilayer plasterboard and cement sheet ceiling or wall systems for optimal acoustic performance control.

Luna Park Big Top - Sydney
Featuring Durra Panel® - Standard Soundsorb Finish.

Fire Resistance

Durra Panel® is a unique, naturally fire-resistant product that releases no dangerous toxic gases, no flaming droplets and no dense smoke. With a fire rated panel to panel joint, Durra Panel® achieves a one-hour fire resistant rating as the carbonising action of the straw hinders flame penetration through the densely compressed panel core.

Durra Panel® has extensive test history on its fire resistance in accordance with Australian Standards and global certification, plus is FM approved as a Class 1 construction ceiling material.

Sustainability

Durra Panel® is manufactured from wheat and rice straw - a natural, renewable annual resource. This agricultural waste by-product would otherwise be destroyed by burning following harvest, contributing to carbon emissions.

The manufacturing process combines heat and pressure to form a solid panel core. A natural polymer in the straw fibre is extracted during this process and acts as a natural binding agent. A water based PVA glue is used to cover the panel in recycled Kraft liner paper. No additional chemical binding agents, glues or resins are added during the manufacturing process. No water or gas is required, and the process produces zero toxic waste. In addition, Durra Panel® can be recycled or composted at the end of its lifespan, making it one of the world's most sustainable building products.

Durra Panel® has an embodied energy content of only 12.6 MJ/m2 throughout its entire manufacturing process. In addition, the straw it is made from grows quickly, making it an easily replenished resource. On the other hand, a stud-and-plaster wall has an embodied energy content of 153 MJ/m2, and the timber used takes thirty years to grow, putting a much greater strain on resources.

To explain that in practical terms, it takes seven acres of straw to build a standard three-bedroom house with Durra Panel®, and that straw will regrow in a year as a by-product of harvesting wheat or straw. By comparison, the 44 trees used in a typical stud-and-plaster wall house requires the clear felling of around half an acre of forest and takes around 30 years to regrow.

Cornish College Sustainability Centre - Victoria
Featuring Durra Panel® - Acoustic Pattern Finish.

Thermal Insulation

Durra Panel® has high thermal insulating qualities. Its dense core acts as a natural thermal mass barrier between internal and external environments. This is achieved by retarding the flow of heat through the material itself rather than reflecting.

With a range of components, insulation levels can be easily adjusted to meet specific project requirements with R values of 4 and above. When combined with a non-ventilated air cavity and insulation in a typical ceiling or wall system, Durra Panel® easily meets the Building Code of Australia (BCA) performance requirements.

O'Brien Ice House - Dockland, Victoria
Featuring Durra Panel® - Acoustic Pattern Finish.

Durability

The unique dry extrusion process used to manufacture Durra Panel® converts the straw resource material into a panel core that is densely compressed and tougher than comparable construction panels.

Durra Panel® is able to withstand the knocks and blows associated with sporting and industrial areas, providing a high-level strength that is ten times more effective than impact resistant plasterboard. With just 25mm of perimeter support, a panel can support an evenly distributed load of 1800kg, without failure through the 50mm panel core. Because of this greater durability, internal areas of Durra Panel® won't need to be revisited making for a true low-maintenance finish.

RAAF Base Holsworthy - Pool Facility
Featuring Durra Panel® - Soundsorb Perforated Cassette Finish.

Trafficability

Durra Panel® is a strong, solid and rigid building material that can be safely walked on during construction, fast-tracking roof decking installation, protecting workers below from falling objects and significantly cutting down labour times on builds. Durra Panel® is a world leader in providing a safe and reliable trafficable ceiling system for workers by removing 90% of working at height risk. It's trafficable nature also makes it the ideal system for any walkable suspended ceiling application, creating serviceable areas while safely supporting workmen carrying hand or power tools.

Simple Installation

All Durra Panel® components can be delivered to site pre-cut and finished, with areas not needing to be revisited once installed meaning no wet trades or extensive scaffolding. The engineered Durra Panel® Lifting Frame also allows for large modules to be assembled on-ground, removing the need for prolonged work at heights and significantly improving on-site safety. For walls, you simply install the panels into a floor track and snap together Durra Panel®'s patented biscuit connector system. For roofs and ceilings, you have the capability to install modules at a pace-setting 100 square metres every hour using the Durra Panel® Lifting Frame.

Star City Casino - Sydney
Featuring Durra Panel® Lifting Frame in action.

Durra Panel® Finishes

Standard Finishes:

There are plenty of ways to incorporate Durra Panel® into your next project with our range of finishes. Each finish can cater to a particular need or application, depending on the space you're trying to create.

SPECIFICATIONS:
Standard Width – 1187mm
Length - Made to order with a maximum 3600mm
Thickness: 50mm or 58mm
Nominal Weight: 18.5 kg – 22 kg per square metre
All materials can be supplied cut to specific sizes.

PLAIN
A compressed straw core between two layers of Kraft Liner. Simple, versatile, affordable.

PAINTED
Utilising our standard Luxoltex paint, for a hard-wearing and low maintenance finish. Available in any Dulux colour.

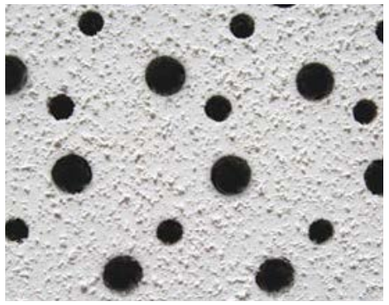
HARDBOARD
Added robustness and perfect for areas requiring flat finished surfaces. Great for residential applications.

CEMENT SHEET
Hardy and durable. Group 2 Fire Resistance and suitable for wet areas.

Architectural Finishes:

PLYWOOD
A design-focused finish for applications requiring a touch of style.

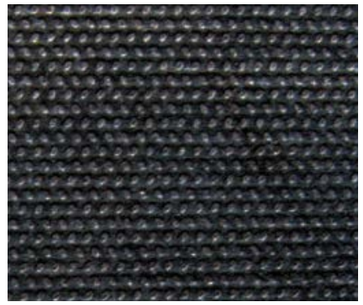
POLYESTER SOUNDSORB
A blend of design and function. Perfect for noise absorption and available in a range of colours.



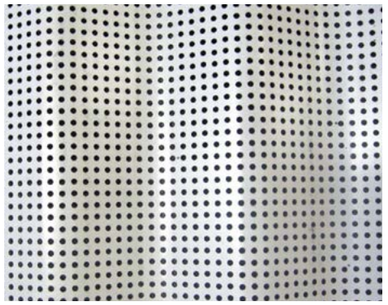
ACOUSTIC PATTERN
Our most common Acoustic finish. Achieves an NRC of 0.49 while remaining impact resistant and low maintenance. Ideal for sports venues and gymnasiums.

Performance Finishes:

COLORBOND
As durable as it gets. Fire and moisture resistance make it the perfect industrial finish. Available in all colorbond colours.



FIBREGLASS SOUNDSORB
For spaces requiring the highest level of acoustic performance.



PERFORATED COLORBOND SOUNDSORB
Combining the performance of Soundsorb with the hardiness of Colorbond yet maintaining the versatility of both. Available in flat or corrugated finish.

DURRA PANEL®

www.durrapanel.com

Ortech Industries Pty Ltd
Unit 18, 1-7 Canterbury Rd,
Braeside VIC 3195 Australia
hello@durrapanel.com
P: +61 3 9580 7766

/DURRAPANEL /DURRA_PANEL